Egods Faith Versus Fantasy In Computer Gaming William Sims Bainbridge

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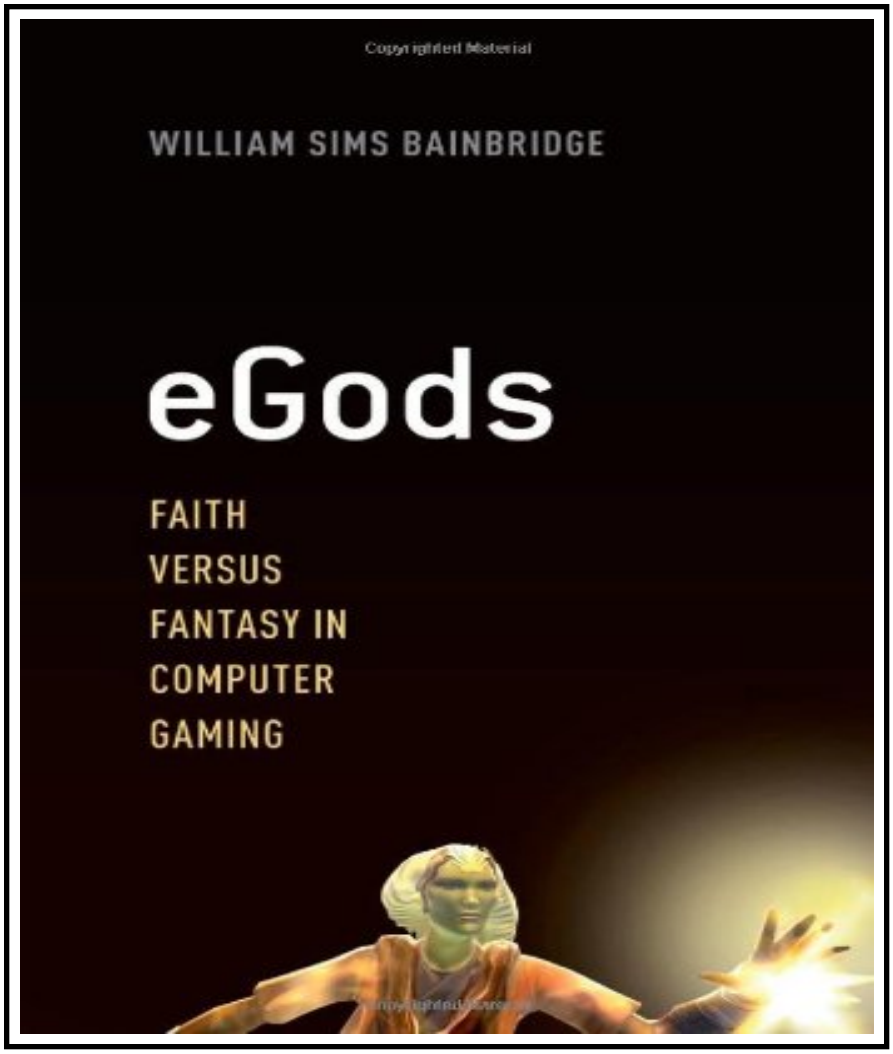

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William Sims Bainbridge

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EGODS

1 DISBELIEF

A priest strides rapidly along the road from Northridge Abbey through Goldshire to Stormwind City, excited that he has been sent for advanced training in the Cathedral of Light. In the Temple of the Moon at Darnassus, a priestess learns new supernatural healing techniques while bathed in moonbeams and standing beneath a colossal statue of the goddess Elune. At the top of a precipice in an archipelago of magic-shrouded islands, an anthropologist studying shamanism wonders if she can trust a totem to save her if she leaps toward the rocks far below. In a remote valley, a shaman prepares to attack archaeologists whose digging will desecrate his people's holy burial grounds, activating a protective totem before unleashing his pious rage. The first of these four religious professionals is a Human, but the others are a Night Elf, a Draenei, and a Tauren. Indeed, none of them are people, exactly, but the avatars of people in the dominant massively multiplayer online role-playing game, *World of Warcraft*.[1]

It is easy to dismiss such avatars as mere tokens in a game, yet through them the user experiences a marvelous world, often for many hundreds of hours, frequently encountering religious symbolism. Imagine that a devoutly religious person said to a *World of Warcraft* player, "I can't believe you take that stuff seriously!" The player could reply, "Same to you, buddy!" If games are not real, then neither is art, or music, or drama, or sports, or politics, or the stock market, yet all of these are real in their socioeconomic consequences. To a significant degree, they are also real in their psychological impact: belonging either to a smug religious sect or to a successful *World of Warcraft* guild can give pride to a person who lacks social status in the wider world. What about the psychology of faith?

Religion has always been deeply involved in the creative arts, but the relationships between them are changing.[2] Perhaps we shall come to see religion merely as an especially solemn art form. Suspension of disbelief is the essence of art, according to Samuel Taylor Coleridge, and electronic games are a new and powerful art form that often depicts religion.[3] Yet we may wonder whether suspension of disbelief is

really very different from belief itself. Traditional religions took their faith very seriously, and pious believers today would be shocked if told their God was not very different from an elf's image on a computer monitor. Yet much may be gained by thinking from that admittedly radical perspective.

At his passing, King Arthur said, "The old order changeth, yielding place to new, and God fulfills Himself in many ways, lest one good custom should corrupt the world."[4] This famous quotation takes on new meaning if we consider that God was part of the old order, even undeniably a good custom. In Norse Ragnarok and German Götterdämmerung, the old Pagan gods were swept aside by the tide of history, yet they like Arthur still live in our imaginations. If humans are by nature lovers of fantasy, then little may be lost if they consider all their gods to be fantasies.

An interesting topic that some erudite anthropologist should explore—and much existing literature touches on—is the extent to which preliterate peoples really *believed* their myths about the supernatural. In the absence of written scriptures and enduring formal organizations, one would think that the myths of preliterate peoples were chaotic and ephemeral, although cultural consolidations might occur locally for brief periods of time. Many classic studies suggest that these cultural mythologies were indeed dynamic and varied over time and space from highly diffuse notions that have little coherent force to relatively well-defined ideologies that have some of the flavor of modern religions.[5] We cannot resolve these fascinating issues here, but it seems safe to say that firm conviction in a well-defined dogma is not the natural state of human religion, but one possible situation that arises within the context of particular social conditions, such as the emergence of strong states that demand loyalty from their citizens.[6] Indeed, the term *faithful* can mean *loyal*; a true patriot is a self-sacrificing rather than a fact-speaking one, and conviction may arise as much from social demands as from personal needs for emotional security.

We can speculate that when ancient people sat around the campfire in the evening, telling tales of heroes, gods, and demons, they knew that all of them were fantasies. But somewhere, across the centuries, the church and state required faith, and faith bred hope in a way that made it precious, which it never had been at the dawn of humankind. Perhaps the cruel necessity to hold rich farmland against enemies that gave rise to knights in armor also demanded uniformity of belief from dukes and peasants alike. But then, the Industrial Revolution and the subsequent Information Revolution deposed the landed aristocracy, sent the peasants to work in factories, and educated everybody to a new level of skepticism. I am proposing a *curvilinear model of religion*: faith was fluid and inseparable from fantasy early in human history, and it will be the same late in human history, but near the middle of human history the social conditions associated with agricultural empires favored the emergence of religious bureaucracies that demanded faith.

Here stand three disbelievers: an Atheist, an Agnostic, and an Aesthetic. The Atheist is certain that God does not exist: end of story. The Agnostic is not sure, or suggests it is impossible to decide, or is unwilling to express personal views about such a sensitive topic: The story never begins. The Aesthetic knows that tales about gods are fables, rather than facts, but some of those fables are quite beautiful: For sake of art, not truth, we can tell endless stories.

Not far away stand three believers: a Conservative, a Moderate, and a Liberal. The Conservative is convinced not only that the holy scriptures tell the literal truth but that any culture that contradicts the scriptures is evil and must be banned. The Moderate is a person of faith who makes a clear distinction between religious fact and artistic fiction, granting the latter some freedom to play with spiritual concepts, so long as nobody takes them seriously. The Liberal feels that religion and the arts both express deep human longings, and that both may contain some metaphoric truth, but is perplexed over what we should really believe.

Many modern fantasy media exist, from movies and television shows, to comic books and novels, to the latest videogames. The best of the solo-player computer games and massively multiplayer online gameworlds are the most effective media for fantasy, because they allow a person to experience magic directly and to act in the fantasy world as if it were real. They take us back to those dark nights of ancient days, when the lights and shadows flickered on the trees around the fire, and it was easy to imagine that the monster described by the storyteller stood nearby in the darkness. Thus, the newest secular technology returns us to the origins of religion so we "arrive where we started and know the place for the first time."[7]

Before we consider gods, priests, cults, and other major concepts in the domain of religion, it will be useful to learn a modest amount about each of several gameworlds, to get a sense of their variety. To do so, I shall briefly describe three real-time strategy games that have a religious dimension, then three massively multiplayer online gameworlds in which the player experiences everything through an avatar and religious implications abound. All of these can be described as virtual worlds, although they differ greatly in visual style and the degree to which the action is primarily social.

Playing God

There are many varieties of computer games, and many games are hybrids of different varieties, so any fully accurate description would need to be long and complex. But at a first approximation, the type usually called *real-time strategy* (RTS) games has two connections to religion. First of all, these are often called

god games because the player takes the role of a god, existing outside the world and commanding the action from an Olympian height. The player of an RTS is not represented by an avatar and does not see the world from ground level but directs armies or nations, as a chess player does but usually in a much more complex and often realistic world. These may be solo-player games, in which the goal is to build the power of a simulated city or nation in competition with others operated by the computer. Or they may be multiplayer games in which a few opponents communicate online.

Second, religion is often one of the features of the simulated society commanded by the player, although usually a minor one. We will consider three examples that reveal interesting issues about religion: *GodStoria*, *Rome: Total War*, and *Spore*. *GodStoria* is one of the very few attempts to build a traditionally Christian religious gameworld, and with all due respect to its creators, for a game released in 2010 it is technologically very primitive. This probably reflects the very limited investment capital available for developing Christian games, as well as the fact that the game was still under development when it was released to the public.

It is best described as a real-time strategy game, and it is also a *browser game*, because it is played online through a web browser. Some browser-based gameworlds employ graphic software to produce a three-dimensional immersive environment, but *GodStoria*, like many others, presents a sequence of two-dimensional web pages, each one updated on the basis of decisions the user made on the previous page. Thus, technically it is a minimalist virtual world, representing the features of the real world in an extremely abstract manner. For example, when soldiers are sent into battle, they are not depicted on the computer screen, whereas in *Rome: Total War*, to be described shortly, every single soldier can be seen, even though they are commanded in groups rather than individually.

GodStoria is based on the biblical book of Genesis. The major first section of this evolving game, which was available to be explored when I did my research, is set in the time outlined near the end of Genesis 11. Ur is depicted as a wide desert territory in which each player has set up a village. The goal is to develop the economy, defend the village, and prepare for an ultimate move to Canaan. For example, *GodStoria*'s tutorial has the user click on a farm in the two-dimensional image on the screen, switches to a screen presenting data about the farm, and requires the user to click "Update" to invest resources to improve the farm. The same is then done for a timber camp, a mine, and a clay pit. All these investments begin to pay off in providing materials, first of all to build a warehouse on land selected by the user, to store the materials. The general principle of strategy games is to go through a period of building resources, training soldiers, and then perhaps engaging in military competition against

other tribes. Of special interest here is that *GodStoria* allows the user to build some architecture that has religious implications, including these as described on its building list page:

- *Temple*: Temples allow you to receive God's blessing and enhance spiritual attack power. Temples with higher levels allow players to receive more blessings. In the temple you can read the word of God and increase your faith.
- *House of Prayer*: Houses of prayer enhance spiritual defense. Houses of prayer with higher levels further increase spiritual defense.
- *Altar*: Here you can offer sacrifices to God at the altar. Decreased faith is restored whenever you offer a sacrifice.
- *Sheep Pen*: Sheep are raised here. Sheep are given as offerings to God and are used as food during a feast. Sheep pens with higher levels can raise more sheep.

Spiritual attack power and spiritual defense are variables that interact with many others in determining the outcome of a battle. An early challenge for players is keeping up their faith, which starts at 100 percent but gradually drops as it is eroded by stone effigies representing competing faiths that are set up in the neighborhood. A player's first experience of battle will be sending a platoon of soldiers out to destroy such an effigy, but after a while the computer will rebuild it, so it must be destroyed repeatedly. In the early months of *GodStoria*'s existence, players complained on the forums that it was costly to sustain faith, yet faith did not offer much in the way of benefits. This can be seen either as a superficial remark about the unfinished nature of the game at that time or as a profound critique of real religion.

At the beginning, each player has one "hero," named Abram. He is not depicted through an animated character, but merely as a two-dimensional portrait on web pages where decisions are made about him. In building an army, one really just assigns numbers to the hero, representing his capabilities and the number of soldiers of various kinds assigned to him. His march to the site of a battle is depicted merely by the passage of time. When a player is constructing one building, no others can be built simultaneously, and the construction goes in stages that take set periods of time. That is the real-time part of the definition of RTS. The strategy part is deciding how to invest resources, including when and where to send the hero to battle. After a while, I was given a choice of two names for a second hero, and I chose Crescens, the name of one of the absolutely most obscure characters in the bible. Crescens is mentioned only in 2 Timothy 4:10 as one of the first Christians.

Although set early in Jewish history, *GodStoria* is a Christian game, which even uses the symbol of the cross in its logo. Using the online resource BibleGateway, it took only a few moments to determine that the translation of the Bible used by *GodStoria* is Today's New International Version (TNIV), which seeks to use modern language while preserving the poetic quality of earlier translations, but which has been criticized for replacing male-centered language with gender-neutral language.[8] This is an interesting illustration of the fact that any well-established religion needs to deal with cultural change and constantly renegotiate its relationship to its tradition. This is not new, as the relationship of Christianity to Judaism reminds us. Indeed, Today's New International Version is not merely a Christian translation but a Protestant one, and yet Genesis and the game are about the early legends of the Jews.

Rome: Total War is a splendid commercial real-time strategy game that depicts many actual battles from Roman history, but concerns religion only in a minor way, as one of the factors in building up one's resources between battles, of which I fought several dozen during my research. The prologue is a tutorial that explains how one builds towns with a growing economy and ruling family as the basis for recruiting an army. The first task is to gain proficiency with the user interface by commanding a very small force that tipped the balance in a major battle between Romans and Gauls in 329 BC. Rome had only just secured the Latins under its hegemony, when a Gaulish army advanced south into Italy. The Senate instructed Captain Decius to stop them, and he in turn sought aid from Gaius Julius, who commanded 42 spearmen, 40 archers, and 24 mounted warriors including himself. Gaius Julius is not an avatar through which the player experiences the world but a hero like Abram or Crescens in *GodStoria*, a key resource commanded in parallel with other resources.

In the game small groups of Gauls detached themselves from their army and crossed a bridge over a narrow river to attack Gaius Julius, but he annihilated them, crossed the bridge in the opposite direction, and struck at the rear of the rather ragged Gaulish army deployed against the forces of Decius. Using his own bodyguard, in one of the times I played this battle, Gaius Julius was able to kill the enemy commander, Dumnorix. He performed splendidly, losing only seven of his triarii spearmen, compared with losses of 185 of the 430 men commanded by Decius and 442 of the 452 commanded by Dumnorix. When he killed Dumnorix, he proclaimed, "This is a day for votive games as a true enemy has gone to join his ancestors. May he trouble them as much as he did us!" This exclamation, of course, was merely text built into the game, triggered by killing Dumnorix.

As a reward for his decisive contribution to the Roman victory, Gaius Julius was given a much larger retinue of soldiers and sent northward to seize the Etruscan town of Tarquinii. Of his 462 Romans, four hundred survived, after having

killed every last one of the 362 defenders, who were under the command of some mere Greek named Admetos. Gaius Julius then settled down to run the town, build its economy, and strengthen his Julian family, assisted by a bounty of 10,000 denarii awarded him by the Senate. He built a shrine to Jupiter, which symbolized the loyalty of his followers, and built roads to facilitate trade and rapid deployment of his army. His son Cnaeus Julius came of age, and another son, Secundus Julius, married a woman named Minervina. We should not quibble about the fact that Minervina is an Etruscan name, because clearly it was time in the course of history for Rome to absorb Etruria. Gaius Julius rejoiced: "Marriage and the home are the bedrocks of Roman greatness, and a strengthening of Rome is a blessing from the Gods."

After one conquers a town in *Rome: Total War*, the surviving inhabitants will be restless, and it is important to convert them to Roman values in order to exploit them economically. Thus, one of the first tasks for a conqueror is to tear down any existing shrines or temples, because they remind the populace of its former culture, and build a Roman shrine or temple. In many RTS games, religion is used either to pacify the population one controls or in some cases to increase the dissatisfaction of the enemy population. This is a completely cynical view of religion, as a tool used by the elite to control subordinate populations.

Many other RTS games use religion in this way, thereby offering an implicit criticism of this influential human institution. The most useful additional example is *Spore*, because it also reveals more about the god-game concept. Launched in 2008, *Spore* was presented by a National Geographic television documentary as a supposedly realistic depiction of biological evolution, following a lineage of fantasy creatures from the single-cell stage in the ocean, through animal, tribal, and civilizational stages, to colonization of distant planets in the fifth and final stage.

In the civilization stage of the game, as the official guidebook explains, there are primarily three different cultural modes that the player's strategy can follow: "A military nation seeks to expand its borders by conquering all other cities, while a religious society wins control of other cities by winning the hearts of its citizens. An economic culture creates vast wealth and uses it to expand its sphere of influence."[9] This is interesting, first of all, because it suggests that three major societal institutions are functional equivalents of each other, and a society can either be based on religion, or ignore it altogether.

Religious people may find this rather insulting, because it treats faith as a tool by which powerful people can control weak people. If the people of a city are unhappy, perhaps because they are paying high taxes to support the war effort, religion can be used in *Spore* either to make them happy or to exploit their misery by inspiring them to revolt. A player may intentionally block trade with a city he

or she wishes to conquer, specifically to make the population unhappy, then bombard them with religious propaganda to make them easy prey for conquest. In *Spore*, players do not battle against each other, so the enemy is always operated by the computer, following its own inhuman algorithms.

As a god game, *Spore* could not be based upon the actual scientific theory of evolution by natural selection from random variation, because the god—that is, the player—needs to be in control of what happens.[10] However, evolutionary programming is a standard technique going back decades in computer science.[11] As a very minor example, I myself published a computer program (and a book chapter about that program) in 1987 in which fireflies having just four genes buzzed around, mated, reproduced, and competed in a small gene pool, illustrating how easy it was to model genetic mutation, heritability, and differential reproduction on a computer.[12] While it has no connections to the creationist movement in religion, for the purposes of giving the player the central role in the game, *Spore* constructed a world in which biological evolution followed creationist principles. At every point in the creatures' evolution, the player shapes them, giving them legs or wings or whatever, on the basis of a personal, godlike decision.

Playing an Avatar

The standard term for a character who represents the user in a computer environment is *avatar*, originally a Hindu religious term for the terrestrial manifestation of a god.[13] There is a growing literature on the myriad ways in which such virtual personas relate to their users, and when a good deal of unique identity is invested in one, we tend to call it a *character*. Except when debating this issue, this book will use the term *avatar* precisely because of its religious implications. In a massively multiplayer online role-playing game (MMORPG or just MMO), the user experiences a virtual world through a single primary avatar, interacting with other avatars and with nonplayer characters (NPCs) that behave like avatars but are operated by the computer. Religion plays central roles in three of the very highest-quality examples: *Lord of the Rings Online*, *Dark Age of Camelot*, and *World of Warcraft*.

Released in 2007, *Lord of the Rings Online* (LOTRO) is faithfully based on J. R. R. Tolkien's novel *The Hobbit* and the *Lord of the Rings* trilogy. Whereas RTS games are often called god games, MMOs are sometimes called *sandbox* games. This term suggest a wide territory in which a person may play with great freedom, in contrast with the more traditional solo-player videogames of earlier years that were linear and in which the player was forced to follow a narrow track, surmounting all the challenges in a set order. Gamer terminology is in constant flux, and a decade into the twenty-first century, sandbox MMOs are often contrasted

with *themepark* MMOs, with the latter having supremacy in the market. The difference is the degree of freedom experienced by the player, higher in sandbox games than in themepark games. The themepark metaphor is very apt, suggesting an amusement park consisting of a number of separate rides and other attractions, organized around a particular theme. Once one gets on the roller coaster, one cannot get off until the ride ends, but one has a choice between the roller coaster and the merry-go-round. Similarly, themepark MMOs offer great freedom until one enters a well defined portion of it, whether a separate part of the computer database, as in the case of a dungeon, or an action-defined sequence like a quest arc.

LOTRO is a themepark that offers many paths to choose from, for example selecting one of four avatar races, which begin their lives in different geographical locations facing different dramatized tutorials: Human, Hobbit, Dwarf, or Elf.[14] It allows the user to create multiple avatars, running them one at a time but having different characteristics and locations in Middle Earth, with which to explore huge, colorful, diverse landscapes while undertaking story-related quests and ascending a ladder of experience levels that confer social status. For my own research, I created two characters, an adventuresome Elf scholar who explored the entire world and achieved the top 65 level of experience, at the time I did this research, and a modest Hobbit who remained within the Shire and reached only level 20.

LOTRO emphasizes cooperation on many levels, including in large persistent social groups called *kinships*. Players also interact with thousands of NPCs, operated by simple artificial intelligence and database access program routines. These include enemies who must be killed, vendors with whom economic exchanges can be conducted, and quest givers who assign players the missions that form the heart of the action. It also offers complex economies for production and exchange of virtual goods, including sophisticated auction systems, and the opportunity to own a virtual house and fill it with virtual furniture and artifacts. One thing that LOTRO lacks is churches and temples, for the same reason that the Garden of Eden lacked them. The entire world is an allegory of Christian religion, in which every place is equally sacred.

Hobbit fiction became remarkably popular in the 1960s, among young people seeking the meaning of life.[15] Tolkien denied that his stories were topical allegories reflecting real-world events, but clearly they expressed abstract moral principles.[16] The claim he sought to deny was that his ring story was an antidote to Wagner's *Ring of the Nibelung*, and an English response to the two world wars against the Germans. The stories do focus on a war, but it is one in which good-hearted people belonging to the four races must unite in opposition to incarnate evil. Tolkien was a devout Roman Catholic, and thus an advocate for a

Universal Church to which all peoples would belong.[17] Writing in a Catholic nation and thus largely for a Catholic audience, French sociologist Émile Durkheim argued that religion represents the society, and that a unified religion like Catholicism did this more successfully than a fragmented tradition like Protestantism, incidentally considering Anglicanism not really to be a form of Protestantism but more like Catholicism.[18] Like his Anglican friend C. S. Lewis, Tolkien was concerned about the tension between temptation and renunciation, which entails avoiding the temptation to use science to fulfill our lusts, and thus renouncing many technologies.[19]

The central metaphor of the Hobbit books is a magical ring that must be destroyed before it falls under the control of evil, thereby giving evil the power to do infinite harm. Found by the hobbit Bilbo in the cave home of Gollum, who lived near the goblins he resembles, it must be carried by Bilbo's nephew Frodo on a long and perilous journey to be destroyed in a raging volcano. Evil manifests itself in two ways. First, the devil Sauron commands vast armies in an attempt to seize the ring for his own purposes. Second, evil lurks hidden in the inner self of an individual person—such as the otherwise noble character Boromir, who died shortly after giving in to the temptation to seize the ring for himself. The player's avatar in LOTRO never gets the opportunity to be tempted thus, but does meet Bilbo, Frodo, and other key characters, and visits many locations described in the first two novels in the series, *The Hobbit* and *The Fellowship if the Ring*. A player can briefly adopt the character of one of Sauron's evil minions, but only through a temporary change of identity, and in their normal state the avatars of different players cannot fight each other and are repeatedly encouraged to cooperate, for example in completing quests that cannot be accomplished alone.

Dark Age of Camelot (DAoC) depicts competition among three great realms in the Dark Ages of northwest Europe: Albion (England), Hibernia (Ireland), and Midgard (Scandinavia).[20] Thus it is a bridge between fantasy and reality, because it depicts with at least moderate fidelity the folklore of these three societies. Each of these three cultures offers innumerable environments and quests for the player, but they are also locked in intermittent warfare with each other, in what is called *realm-versus-realm* combat. Thus, avatars are encouraged to cooperate within their own realms, and to fight to the virtual death against avatars from the two other realms. There exists no overarching moral imperative, and the three realms have entirely separate religious cultures.

Although Albion possesses churches, they contain little specifically Christian symbolism. The tombstones that miraculously appear when avatars die differ in symbolism by realm, the Hibernian ones displaying the famous circled Celtic cross, the Albion one carrying a picture of the Holy Grail, and the Midgard ones decorated with a T-shaped representation of Thor's hammer, Mjöllnir, under two

carved dragon heads. The symbol carved into the Round Table could be mistaken for a Celtic Cross, or, for that matter, a German Iron Cross or a cross pattée, but really its shape is designed merely to blend into the round table, and thus it has four equal arms that grow wider as they extend from the center.

Camelot, the capital of Albion, is depicted anachronistically as a formidable medieval city, complete with a cathedral and housing the Round Table in a high castle. Standing just outside Jordheim, the capital city of Midgard, is a nonplayer character named Snorri Sturluson, who gives the player's avatar a quest or two. Sturluson was an actual Icelandic historian who wrote the *Prose Edda* around the year 1200, a Christian who wrote sympathetically about Pagan traditions. Apparently he respected the people of pre-Christian times, and believed that gods are mythologized versions of actual historical figures, the theory of legends technically called *euhemerism*.[21] Of course, the folkloric connections were intended by the creators of the gameworld, who proclaimed:

> Camelot has an immediately identifiable background that will be familiar to anyone with even the most cursory knowledge of mythical history. The Arthurian legends, the Norse Sagas, and to a lesser extent, Celtic folklore, are all represented in the game. The gods in the game will come from the pages of well-known mythology—gods like Odin and Thor, heroes like Cuchulain, Lancelot, and Galahad will all be part of the game's background.[22]

The legends of Arthur are based in the assumptions of the medieval society in which the stories were written down, yet his period was the Dark Ages more than five hundred years earlier. In my brief textbook *Online Multiplayer Games*, I used DAoC to illustrate my concept of *vector history*. This concept belongs to historiography, our understanding of how the viewpoints of historians themselves are a product of history, and thus change over time. Here is my definition: "A *vector history* is one that looks at a particular point in past time from another, later point in past time, or from a different culture. Note that in doing a vector history we select a point of view (in time and cultural space) that is not our own, and then look at a third point in human history from that perspective."[23] When we distance ourselves from an historical account created by an earlier generation, we often label it a *legend*.

Dating from 2004, *World of Warcraft* (WoW) is the most popular full-featured virtual world, reaching twelve million long-term subscribers worldwide.[24] The setting is a distant planet, Azeroth, and the disintegrating fragment of a second planet, existing in a universe where the laws of nature are different from those in our world. There is a medieval quality to the worldview; for example, the planets

are flat, and the key elements of nature are earth, air, fire, and water. Instead of having a coherent set of overarching socially constructed categories—the dualism of good versus evil or the trinity of three equal but different realms in competition with each other—WoW is based on the dynamics of inescapable chaos, in which categories are complex and constantly reforming. There does exist a dichotomy of two factions, the civilized Alliance and the barbarian Horde, and an avatar in one cannot talk with an avatar in the other. Different versions of WoW exist, with different rules for combat between players, but in principle even the two great factions are only temporary coalitions of races that could easily fragment.

In the original 1994 two-person strategy game *Warcraft: Orcs and Humans*, the tribal Orcs invaded the civilized lands of the humans. They battled each other in a manner similar to chess, but over complex terrain rather than a simple chessboard, and with evolving sets of game pieces depicted as active virtual characters. By the time WoW itself was released a decade later, the world had become vastly larger and more complex, and both Orcs and Humans had assembled large coalitions to compete with each other. Orcs were in the Horde, to which minotaur-like Tauren, voodoo-practicing Trolls, and zombie-like Undead also belonged. The Alliance included not only Humans but also Dwarves, Gnomes, and Night Elves. In 2007 two other races were added, the Blood Elves joining the Horde and the Draenei joining the Alliance. In 2010, after I completed my research, two more races were added, the technophiliac Goblins in the Horde and druidic Worgen in the Alliance.

I ran avatars in all of the races before Goblins and Worgen were added. Each of these ten races had a distinctive culture, history, and symbolic relationship to science and technology, but some were more noteworthy than others. Both the Tauren and the Night Elves preserve nature. They share some of the same religious assumptions, although otherwise their cultures are quite different. Both the Undead and the Blood Elves employ dangerous technologies that despoil the environment, biological warfare in the case of the Undead and technologies equivalent to nuclear energy in the case of the Blood Elves. The Dwarves and Gnomes share the same city and the same love of apparently more benign technologies, including civil and mechanical engineering in the case of the Dwarves and broken computers plus unsuccessful spaceflight technologies in the case of the Gnomes. The Draenei are a technologically advanced species that are exploring the options for returning to their ancient traditions. Most Horde races are barbarians, and so they possess shamans rather than priests, whereas elaborate priesthoods exist among some of the more civilized cultures.

World of Warcraft is remarkable for the great diversity of religious groups it depicts, many of which are populated entirely by nonplayer characters and to

which a player's avatar cannot belong. In a few cases, it is possible to build a positive reputation with a group of NPCs, doing quests for them and receiving benefits in return. But often a nonplayer religion is a cult or sect that must be battled, holding its own virtual territory where quests must be completed. The landscape is dotted with shrines and other sacred places, and some of the major cities possess huge temples. WoW takes a postmodern approach to religion and morality, regarding them both as extremely problematic. For example, a central member of the team who created WoW, Chris Metzen, published a marvelous story based on the WoW mythos, "Of Blood and Honor," that debates two incompatible moral codes.[25] One defines morality as loyalty to one's own family and clan, and the other is based on an abstract code of behavior that treats strangers the same as family members. This suggests just one of the many ways in which the philosophies of the most complex games connect to social theory.

The New Paradigm

The theoretical tradition on which this book is based might be called *exchange theory*, *social cognition theory*, *rational choice theory*, or the *New Paradigm* of the sociology of religion.[26] Truth to tell, it has many variants and draws upon a breadth of prior work in other traditions, so there may not be any one term to describe it. The variant described here was developed by Rodney Stark and myself, and may be the most fully developed explanatory theory of religion, presented in seven axioms, 104 definitions, and 344 derived propositions, which we do not have the space to cover thoroughly here.[27] Given the importance of the strategic exchange of value and information to the theory, it could even have been described as a variant of game theory that emphasizes impression management through role playing and reality defining.[28] Aspects of this theory have been simulated using game-like computerized multiagent systems.[29] Its key principle is that the human mind evolved to solve practical problems following cognitive explanations, and when it proves impossible to achieve a strongly desired goal, people are open to religious explanations that promise to satisfy desires by some supernatural means. Religion thus serves as a socially supported *compensator* that compensates people psychologically for the lack of desired rewards.

Central to the theory is the cognitive-emotional concept of compensators: "*Religion* refers to systems of general compensators based on supernatural assumptions." "*Compensators* are postulations of reward according to explanations that are not readily susceptible to unambiguous evaluation." "*Supernatural* refers to forces beyond or outside nature which can suspend, alter, or ignore physical forces."[30] One flavor of this theory might be called the *new economics of religion*, which stresses the fact that people often treat compensators as rewards, thus

according them value and making them salient for economic exchange and for any other kind of human behavior that can be analyzed in economic terms, such as multiplayer games.[31]

Little notice has been given to the fact that religion is not the only sphere of life oriented toward compensators. The same is true for spectator sports, theater, movies, television dramas, novels, and music. Sports fans rejoice in the victories of their teams almost as if they themselves had won, apparently gaining subjective status comparable to that of religious sect members, feeling they are better people for their association with the athletic god that they adore. Clearly, people gain vicarious feelings of satisfaction, exaltation, and enlightenment from experiencing powerful fictional narratives.

Around the year 2000, the new discipline called *cognitive science* added three major ideas that could be integrated with the New Paradigm. All start with the recognition that human cognition is a complex set of functions in the human brain, which were shaped by biological evolution, primarily under the conditions of life hundreds of thousands of years ago. In those ancient days, humans learned to cooperate and to anticipate the dangers and opportunities around them. Furthermore, they learned to plan, which required a mental template for goal-directed action. Finally, the brain developed a huge capacity to store information, some of it temporarily holding short-term memories of the immediate past to keep the individual well orientated in the current situation, able to act energetically on the basis of knowledge of the immediate situation. Yet planning, cooperation, and the increasingly complex behaviors required by technology also required long-term storage of more abstract knowledge. Briefly stated, here are the three religion-relevant ideas from cognitive science:

1. *Mind reading:* The human brain possesses a set of functions that models the mind of an animal or other person, which evolved to permit complex, appropriate action with respect to prey, predators, and partners. This set was so important for human survival that it is hyperactive, imputing consciousness and intentionality to many complex natural phenomena that are not really conscious. This hyperactivity predisposed people to believe in supernatural beings.[32]
2. *Narrative:* In order to be able to plan effective action to achieve goals that could not be achieved immediately, and to communicate these plans to each other, humans developed a reliance upon narrative as a mode of thought. A narrative describes a person who has a goal and interacts morally with other people to move toward that goal, overcoming obstacles in achieving a series of subgoals, to the ultimate attainment of the goal. This narrative form of cognition predisposed people to believe that the world is

meaningful, and to understand meaning in terms of stories like the legends of a religion.[33]

3. *Memory:* While a full understanding of memory still eludes science, it seems that memories of specific momentary situations or brief scenes of action are stored in something just beyond short-term memory, as records of memorable episodes. The *episodic memories* that endure and have impact are connected to strong emotions. Less emotionally tinged *semantic memories* store a variety of kinds of facts, from the meaning of a word to the location of a local natural resource, learned through repetition. Different kinds of religion appear to use different kind of memory. Emotionally intense religious sects rely upon powerful episodic memories, such as a conversion experience. Established denominations, with their intellectualized theologies, rely more heavily upon semantic memories, which are strengthened gradually over time by the repetition provided by rituals.[34]

These and other ideas from cognitive science improve the basis on which we can understand religion, but they do not yet explain religion, as it developed over many centuries in urban-centered, agriculturally based ancient nations. This can be accomplished only by incorporating theories of communication and the construction of formal organizations based on social and economic exchanges, as the New Paradigm does. Individual cognition does not in itself explain such essential features of religion as the emergence of the priestly role, the development of complex doctrinal systems, the creation of religion-focused artworks, conformity to moral and ritual expectations, and the alliance between church and state. Nor can the purely cognitive theories explain secularization in the modern world, or the organized opposition to secularization that one finds among the societies dominated by the Judeo-Christian-Islamic tradition.

Secularization can be defined in several ways, depending on the facts one wants to explain and one's theoretical predispositions. An extreme definition would be: secularization is the death of religion. A more moderate definition is: secularization is the disestablishment of religion, removing it from a dominant position in the structure of society but not endangering its existence. An example of the latter is a marvelous journal article by Talcott Parsons published back in 1964, "Evolutionary Universals in Society."[35] When I came to know Parsons personally, he seemed very much like a parson to me, a mild-mannered but very powerful minister who offered to lead students to their philosophical salvation. He argued that religion was one of the very first institutions to evolve in human social evolution, of permanent importance in establishing the basis of morality, but of decreasing significance as other institutions evolved to take over some of its subsidiary functions. Although not entirely convinced by this argument, I greatly

respected its sophistication. After all, our advanced brains could evolve only after we had complex digestive systems, and while the human appendix is vestigial, the stomach certainly is not.

Aware of Parsons's work, but approaching the question from a different direction, Stark and I developed a *homeostatic* model of secularization. In *homeostasis*, the overall structure and function of a system remain constant, while numerous minor changes occur within it. Especially among highly educated segments of the population, science and the cosmopolitan viewpoint produced by interaction with different cultures erode faith. In addition, members of the societal elite have less need of many specific compensators, such as the subjective social status that membership in a religious sect confers. Thus, families that ascend in social status tend to secularize. However, in a constant circulation of the elites, other people are dropping in social status, and thereby developing increased need for religious compensators. Entire denominations secularize as their leadership gains status in secular society, but the result is religious schisms, in which sects break away from denominations and revive religious faith. Society "runs in place," containing much movement but making no progress, as secularization is balanced by revival and religious innovation.

When Stark and I developed this perspective, we were also aware of a very different cyclical secularization theory proposed back in 1937 by Pitirim Sorokin.[36] As it happens, Sorokin founded the Harvard Department of Sociology, which Parsons later dominated, and Sorokin felt that Parsons had even betrayed him in the academic status game.[37] Like some other European right-wing social theorists, notably Oswald Spengler,[38] Sorokin argued that every successful civilization in based on a distinct set of ideas, which define it in distinction to other civilizations and give it strength, but which inevitably erode over the centuries. In its youth, a civilization is *ideational*, asserting that reality is spiritual rather than material. Often, the civilization is created by a radical group, perhaps even military conquerors, who demand faith in the particular ideals that justify its rise. Once a newly risen civilization is secure and prosperous, its ideals slowly shift, even over the span of a thousand years. It becomes more *sensate*, believing that reality is whatever the sense organs perceive. Its aims are physical or sensual, and it seeks to achieve them through exploiting or changing the external world, as our own civilization does through godless science and technology. Eventually, though, Sorokin argued that the sensate phase of a civilization ends in collapse, followed by a bloody period of chaos that may last many centuries, until a new civilization arises at the beginning of its own ideational phase.

The three MMOs described above nicely illustrate the fundamental issues in the debate between Parsons and Sorokin. Like Parsons, *Lord of the Rings Online* asserts that religion can serve as the universal, enduring support for morality,

offering optimism even during times of great social turmoil. Like Sorokin, *World of Warcraft* assumes that civilizations fall, as well as rise, while faith and faithlessness are both parts of the historical dynamic. Human society in WoW has disintegrated, as its elite lost faith and used religious institutions merely as convenient tools, whereas the Elves split into two factions, Night Elves, who are like a fundamentalist religious sect, and Blood Elves, who are the extreme in technological secularization. Meanwhile, the Orcs are just beginning to establish their own civilization, just emerging from tribal shamanism and not yet quite ready to erect temples. *Dark Age of Camelot* takes an even wider view, contrasting three civilizations at about the same stage of development, but based on different beliefs. Thus insights about the competing social-science theories can be gained by empirical research inside these virtual civilizations.

Research Methods

My chief research methodology was to explore the gameworlds by playing them with the primary goal of learning rather than winning, but winning was a requirement for exploring their more advanced virtual territories. In my previous research in *World of Warcraft*, fully 2,400 hours were invested in running twenty-two avatars of every race and class. A few other games tabulate data about hours played: *Star Wars Galaxies* (in which I invested 618 hours), *Lord of the Rings Online* (479 hours), *Tabula Rasa* (305 hours), *EverQuest II* (262 hours), *Rift* (214 hours), *Gods and Heroes: Rome Rising* (194 hours), *Warhammer Online* (105 hours), *Sacred 2: Fallen Angel* (46 hours), and *Guild Wars* (44 hours). Other MMOs described here lack timers, but I estimate that my investment in each of those ten was greater than one hundred hours, and often significantly greater: *The Matrix Online*, *Dark Age of Camelot*, *Age of Conan*, *Pirates of the Burning Sea*, *Pirates of the Caribbean*, *Final Fantasy XI*, *Star Trek Online*, *Dungeons and Dragons Online*, *Fallen Earth*, and *Star Wars: The Old Republic.* In the case of seven games that required reconnaissance but not exhaustive exploration, I took an avatar up to level 25: *Aion*, *Faxion*, *Perfect World*, *Forsaken World*, *Runes of Magic*, *Lineage II: Goddess of Destruction*, and *Elder Scrolls IV: Oblivion.* Solo-player games tend to be short, but some of them I only sampled, while completely finishing these four: *The Da Vinci Code*; *Chronicles of Narnia: The Lion, the Witch, and the Wardrobe*; *Star Wars Episode III: Revenge of the Sith*; and *Constantine*.

On the level of the mechanics of data collection, a prime technique was taking tens of thousands of screenshot pictures of the display on the computer screen, especially capturing all the text and fundamental actions of each significant quest arc. In the case of very popular games, many online data resources were also used. For example, WoWWiki (http://www.wowwiki.com) is a very extensive

encyclopedia of *World of Warcraft* information, while Wowhead (http://www.wowhead.com) provides details of all the quests, both of them based largely on volunteer input from players. Of course, I would never rely entirely on these sources, but always observed the quest or other virtual experience myself. On occasion I would use database systems associated with the game to do a census of avatars or gain other systematic data suitable for statistical analysis.

In some gameworlds, notably *World of Warcraft*, I was a very active member of guilds or comparable groups of players, and benefited from the experiences of my associates. Indeed, a medium-sized WoW guild I myself founded in the spring of 2008 was still in existence four years later. However, the need to spend time taking screenshots and maneuvering my avatar into situations where useful information would be available rendered me a somewhat unhelpful team player, so I had to use online forums, blogs, and the other data sources to gain a full appreciation of the social implications. In some of the MMOs, reading the in-game text chat was especially useful. One excellent example was the help chat in *Fallen Earth*, which was often moderated by a very competent employee of the game company, and where experienced players provided advice for inexperienced ones. In several MMOs, my avatar joined a guild that had a very active text chat, learning more from what the guild members discussed with each other than from going on game quests with them.

In the experimental scientific method, research is carefully designed to test hypotheses logically derived from theories. This study did not use that method, but employed an approach that I believe gave comparable results. Rather than just wandering around in the virtual worlds and seeing what happened by chance, I very carefully planned out what my avatar would do and where it would go, to gain desired data. This meant that I had to begin by doing some reconnaissance, both inside the gameworld and in online information sources, and develop avatars that would have appropriate abilities and personalities for the particular lines of research they would undertake. Having the theories discussed in this chapter in mind, I identified nine distinct areas of the social science of religion that could be the framework for organizing the data, suitable for analysis in terms of the theories. The following chapter sets computer gaming in the wider contest that is sometimes called the modern *culture wars*, especially in the struggle between traditional religion and secular humanism. The nine chapters that follow it each focus on one aspect of religion that social scientists seek to understand, and an appendix briefly describes the forty-one gameworlds on which this book is based.

The nine topic-focused chapters are not merely a convenient way of organizing the research findings, nor just an analytical framework, but nine high-level scientific quests that motivated and guided the research from the beginning. In gamer lingo, strings of connected quests are called *quest arcs*, and they have some

of the sacred quality of Noah's Ark and the Ark of the Covenant, providing a sense of deeper meaning. The four *World of Warcraft* avatars mentioned in the first paragraph of this chapter were on sacred quests, the first two to gain greater abilities that would allow them to accomplish new quest arcs, and the last two in the process of doing two more specific missions, which had been formally assigned to them by quest givers in the gameworld. So that was the primary research methodology that guided my ethnography, discovering all the specific missions I need to undertaken to triumph in nine great quests that had been assigned to me by the gods of science.

We naturally but naively think religions are about gods, so the first of these meta-quests is "Deities," reported here in chapter 3. In Judeo-Christian-Islamic societies, gods are spoken of in the singular and capitalized: God. When Durkheim argued that God was a metaphor for society, representing the unity of adherents, he implicitly favored monotheism because it represents unity, either of one people as in Judaism or of all people as in Christianity and Islam, under a single Lord. Some scholars believe that monotheism encouraged the emergence of science during the Renaissance and afterward, because it assumes that all of nature was created by one deity according to one law that can be discovered through research.[39] But humanity is not unified, and nature seems to be a chaos of conflicting forces. Thus, monotheism expresses a utopian ideal, but harsh reality may better be described by polytheism in which multiple deities compete. The computer games described here are about winning, and thus about competition, but with the paradoxical promise that all players can win. From the "winner take all" perspective of chess or tennis, this seems unnatural—even supernatural—and one way it can be accomplished is by letting every player triumph over nonplayer characters, in a fictional struggle between virtual gods, even sometimes fighting against deities.

Chapter 4, "Souls," contrasts the Judeo-Christian notion of a unitary, immortal soul with the Indo-European idea that each being has multiple finite aspects which can be represented by different avatars. So-called Turing machines, early digital computers, were designed according to the soul principle, and a degree of unity is provided to the human mind by the limited capacity of human short-term memory.[40] However, modern cognitive science views the brain as a collection of rather separate modules, each assembled from submodules composed of individual neurons, and similarly modern sociology view humans as collections of distinct roles. In gameworlds, devoted players exhibit the psychological concepts of *protean self*, as they shift from avatar to avatar, and *multiplex self*, as they run multiple secondary avatars simultaneously. Given the human ability to play the role of being another person, and the almost endless possibilities provided by virtual world technology, in future many people will experience ancestor veneration avatars (AVAs). To do so, one merely creates an avatar for a gameworld

based on a deceased relative and uses the perspective of that relative while playing the game. This interesting opportunity suggests that abandoning the primitive notion that humans possess unitary, immortal souls may liberate us to explore a number of rewarding spiritual alternatives.

If gods fade out of existence, and souls disintegrate, the chapter on priests considers a very different but parallel consequence of disbelief. Priest avatars, or avatars with similar functions like clerics or mages, exist in most fantasy gameworlds, yet many of the aspects of real life that motivate religious professionals are lacking. Permanent death is generally absent, so nobody needs to officiate over funerals, and the absence of families limits the need for marriage ceremonies. Religions, however, are prominent in the story lines of MMOs, so priest characters must inhabit the many virtual cathedrals and temples. The chief social role of virtual priest avatars is as healers, typically in team combat where the priest supports a warrior who directly engages the enemy. In the real world, women are more religious than men, but men dominate the clergy, while in gameworlds an unusually high fraction of the priests are female. Only rarely do games include very elaborate religious rituals, and the ones that do tend to be unpopular. These observations suggest that the erosion of belief in postmodern culture may also erode or at least transform the roles played by professional clergy. Suspension of disbelief may allow game companies to make a profit, but the priesthood may go out of business.

Shrines are the homes of gods, and the chapter with this title covers all forms of sacred architecture, including churches, cathedrals, temples, and monasteries. Religions differ in terms of how strictly they separate scared objects and places from profane ones, with animists believing that everything has a sacred quality, and dualists being strict separationists. Many gameworlds make a clear distinction in terms of their mythologies, identifying some rocks as shrines, but not all. In technical terms, game designers distinguish the *display model* that produces the visual image from the *world model* that determines how the avatar can interact with it. For example, the image of the many stones making up the wall of a temple is a single graphic that belongs to the display model, while the programming that prevents the avatar from walking though the wall is part of the world model. This is akin to the distinction that architects make between form and function, although ideally form follows function. In gameworlds, a third factor combines with form and function, namely, the narrative that is expressed through written text and the actions of meaningful story lines. Thus a virtual shrine or temple can evoke the supernatural through visually resembling something sacred in the conventional world, by being spoken of in the narrative as religious, and by functioning in the game to provide a measure of transcendence from the material world.

Chapter 8, "Morality," considers the central function of religion in sustaining a code of behavior for members of the society that adheres to the particular faith. In

social science, one major approach is criminology or the broader sociology of deviance, and concepts from this field can illuminate dimensions of the gameworld even though faith is probably not a powerful determinant of behavior by avatars. As it happens, during the seven years I taught at the University of Washington, my biggest class was Social Deviance, where I was inspired by the interest expressed by five hundred to seven hundred students per year. The class covered religious deviance, a field my research then concentrated in, as well as providing an introduction to criminology and to the social science of mental disorder, the field in which I had taken my graduate exams. A key theme of the chapter naturally is the standard academic conceptualization of how religion and morality relate to each other. Morality evolved to support the success of one's own family or tribe, by building a partnership among tribe members. But it is problematic in a world where separate tribes compete to the death over limited resources, as is the case in many gameworlds and may become the case in the wider world that humans inhabit.

The chapter "Cults" examines how religion sets standards for behavior and belief—indeed how religion comes into being. Every religious tradition began as a cult, such as the one Moses led out of Egypt, or as a cultlike sect that broke away from an existing group, as Christianity did from Judaism. Indeed, the descriptions of very early Christianity found in the New Testament makes them seem very similar to the two modern communal cults, the Process and the Children of God, about which I wrote two books.[41] Consider Acts 4:32, "And the multitude of them that believed were of one heart and of one soul: neither said any of them that ought of the things which he possessed was his own; but they had all things common." Cult movements are deviant religious organizations with novel beliefs and practices, and fictional ones abound in the gameworlds. Real-world cults can be analyzed in terms of the new supernatural compensators they create through intense social implosions, or through the methods they use to absorb new members. However, both real and fictional cults can be considered total works of art, comparable to the grand operas about Pagan gods written by Richard Wagner, but experienced as a realm of real life by cultists and gamers alike.

Religion has many roots, but the taproot reaches into the grave of every deceased friend or family member, and draws from the depth psychology of our own personal fear of dying. Ultimately, religion is about meaning that transcends mortality, so a gloomy chapter on death (chapter 10) prepares this book for its more optimistic conclusion. Much of the action in computer games involves killing, causing the deaths both of players' avatars and of nonplayer characters. But death in MMOs is not permanent, because in almost every instance the deceased character can return to life. Popular games do not explicitly employ the Hindu concept of *samsara*, referring to an endless cycle of birth, suffering, death, and reincarnation—yet as a practical matter the nonplayer characters are trapped

in this tragic pattern. Huge cemeteries, individual graves, and splendid tombs abound. A few memorials for actually deceased persons can be found. In some games, the player's avatar can be one of the Undead, supposedly having experienced an entire life before the player began the game, and now existing in a form not unlike a corpse. The games may trivialize death, but an argument can be made that religions do the same, by pretending that it is less horrifying than it really is.

To end the book on a positive note, the final chapter concerns quests. In a very real sense, this chapter uses games as a vantage point from which to debate whether life has meaning. Competitive games have goals, both small ones and large ones, collecting points of various kinds on the way toward winning. A superficial meaning of the word *meaning* comes from translation of one word into another, for example connecting the German word *Spiel* to game, or stealing a Latin word for game to create the adjective *ludic*. But humans want *meaning* to have a deeper meaning—referring to some transcendent purpose. One way they do this is through seeking to achieve goals in life, which can range from the very simple goal of having lunch to vastly richer goals such as creating a good society for our children to thrive in, thereby giving both the struggle and the accomplishment a significance to human beings. The purposeful nature of human questing translates not only to the acts performed by the person but to the features of the surrounding world that play roles in the quest. Thus, humans invest meaning in life through their questing, whether or not gods already did so. Along the way, players lose some games, and death is the ultimate defeat. The ultimate victory is to play eternally.

Conclusion

This book does not claim that multiplayer online games will supplant religion, but that many of religion's historical functions have already been taken over by other institutions of society, in the process of secularization, and games will play a role in the further erosion of faith. Quite apart from what psychological and social functions games may play, they provide a vantage point from which to consider changes happening in the wider culture and to celebrate human creativity. Thus fantasy is not a perfect substitute for faith, but it has some advantages. One is freedom, because a player can decide from moment to moment which game to play, which avatar to play inside it, and within certain limits what goals the avatar should seek. Precisely because religion has traditionally oversold its value to humanity, and such value as it has may decline as many competing cultural institutions arise, fantasy need not simulate faith. Indeed, to describe secularization as the erosion of religious faith is too negative a way to define it. We might better say: secularization is a form of cultural progress that liberates the playful human imagination.

2 THE CULTURE GAME

The larger world surrounding the online gameworlds has some of the qualities of a game itself, and this fact relates directly to both religion and the gameworlds. The form the relationship takes can be described in terms of the well-established method of training military officers known as *war games*. This book and its topic are enmeshed in a *culture war*. The two sides are not clearly drawn, but on one side we can vaguely see conservative forces that want to preserve traditional American culture including old-time religion, and on the other side radical forces that are exploring alternative cultural options connected to new technologies. One battlefield in this war is federal funding of scientific research, which in recent years has included computer games. Thus the admittedly minor battle over federal funding of game-related research is like a tabletop war game, recapitulating on a smaller scale the huge culture war waging in society at large.

Of course the word *war* is an exaggeration here, because people are not really being killed, although significant financial resources are threatened. From the perspective of the gameworlds, war is an appropriate metaphor, because many of their backstories involve wars, yet no real blood is shed. Critics of the current political process in the United States and many other nations decry the flagrant use of deceptive rhetoric by politicians and their habit of accepting donations from vested interests that do business with the government. Yet both of these "misbehaviors" are what one might expect if politics were a complex game in which deception and influence trading were standard features of the set of rules.

This book concerns gameworlds, so it is not the proper place for a detailed analysis of the current political scene, from the formal perspectives of political science and political sociology. Given that I wrote this book exactly a half century after I first registered to vote, perhaps I can be forgiven for offering an ordinary citizen's perspective on how the political landscape has changed in the United States. I remember hearing Senator Strom Thurmond speak, just when he was switching from the Democratic Party to the Republican, in opposition to some

aspects of the civil rights movement and in loyalty to the Old South. Whatever one may think of the man's politics, he was a remarkable relic of the past, as symbolized by the fact he was still serving in Congress at the age of 100. Abraham Lincoln, it will be recalled, was a Republican, and while both modern parties support racial equality, many southern conservatives shifted as Thurmond did from Democrats to Republicans.

As a sociologist of religion, I have watched the religious realignment of the two parties with some interest. At the height of the civil rights movement, many of its leaders were clergy, Reverend Martin Luther King, Jr., being only the best known. A few leaders on the political left continue that tradition, but a powerful connection between the evangelical movement and the Republican Party has arisen in recent decades. Many Republicans today believe that the following cultural commitments naturally harmonize with each other: free markets, limited government, strong national defense, and religious conservatism. An entire book could be devoted to a serious analysis of how or whether these four really fit together, rather than being a temporary coalition of logically unrelated ideologies, brought together by accidents of history. However, at the moment the free-market Republican goal of reducing the costs of government combines with the cultural traditionalism of "the religious right" to form the basis of opposition to government-supported research on games and virtual worlds.

Of course, the political dynamics are very different in other countries. Many of the games covered by this book were developed in Asian nations, or by international companies with Asian investment, and some of them incorporate diluted versions of Asian religious traditions. In earlier publications, I have examined a number of gameworlds created by European companies, and a few are mentioned in these pages. By the standards of the United States, both Asia and Europe are relatively secular regions of the world. The Americas are a much more religious region of the world, including most nations south of the United States. This point raises an interesting fact: information technologies in general, and online games specifically, have become popular in Latin America more slowly than the economic prosperity and educational level of its middle classes would have predicted. I sense that Latin America is catching up, as illustrated for example by the increasing number of articles in the Spanish-language version of *Wikipedia*, and it will be interesting to see if the recent introduction of MMOs into Mexico and South America will lead to the creation of new games more in harmony with Catholic perspectives.

It is important to note that the most popular MMOs are in the fantasy category, which inevitably means they have nonstandard supernatural content. As of December 29, 2011, the MMO blog MMORPG.com listed fully 543 games. Included were many that were defunct, had not yet launched, emphasized real-time

strategy rather than role playing, or were very minor browser-based games, yet the list provides a good general picture of the MMO universe. For example, 84.9 percent of the 543 MMOs included player-versus-player combat, 5.7 percent did not, and the situation was uncertain for the remainder. In terms of the genre of the game story, fantasy MMOs were by far the most common with 62.2 percent, followed by sci-fi with 17.1 percent. The other categories were historical (9.2 percent), real life (5.2 percent), sports (3.7 percent), superhero (1.5 percent), and horror (1.1 percent). This book includes a few sci-fi and historical games which have religion-related content, as well as many fantasy games. The fraction of solo-player videogames and computer games devoted to fantasy is lower, because many of them are based on adventure movies or other nonsupernatural media content. But fantasy dominates the online MMO universe, and thus virtual worlds tend to possess deviant supernatural assumptions.

Religious Tension

The concerns that religious conservatives have about electronic games are clearly stated on a website called Christian Spotlight's Guide 2 Games.[1] A large number of reviews have been posted on the site, which is based on "a Christian worldview," "to assist gamers and parents in making wise decisions in their choice of electronic games." The reviews were written by a variety of people who actually played the games and had some background as videogame players. Indeed, many of the reviews are quite sophisticated, assessing the pros and cons of a game in a balanced and clear manner, so visitors to the site can make up their own minds. Reviewers share three general areas of concern: (1) sexual content that they consider inappropriate for youngsters and in extreme cases for adults as well, (2) gratuitous and graphic violence that may disturb children and provide a bad model for adult behavior, and (3) non-Christian religious or magical content that contradicts their religious views. The third of these is most relevant here.

Checking Christian Spotlight near the end of 2011, I found reviews of five of the games covered here, written by four different reviewers, each of which had a section describing problems with the *spiritual content* of the game. The following excerpts clearly suggest a tension between traditional Christian faith and the supernatural assumptions in the games:

> *Elder Scrolls IV: Oblivion*: This game is quite spiritual, just not in a good sense most of the time. Members of the Dark Brotherhood speak of the "Night Mother," and a deity by the name of Sithis that they often refer to as if he's a god. The Night Mother turns out to be a ghost. There are numerous references to the gods, typically referred to as "the 9," and you can

visit any of their temples to pray to a specific god to have your attributes fixed if they are hurt, or you can have diseases cured. In the beginning of the game you are confronted by the emperor of Cyrodill (the land the game takes place in) and he speaks of how the gods brought you two together and he asks what your sign is. You must then pick a specific star layout that you apparently were born under which then gives you a special ability. Throughout the game, especially in the Dark Brotherhood, you see occult like shrines.[2]

Guild Wars: Prophecies: Magic, magic, and more magic, some gods, and more magic. The game revolves around the ability to use magic. You can cast fireballs, throw ice shards, call lightning, or use the dark arts of necromancy to raise the dead to destroy your opponent. While it isn't said where the power of the magic comes from, it's fairly obvious that the source is spiritual as most magical abilities are called forth by certain movements or sayings. The storyline involves some talk about gods, but it's with a lowercase 'g' and isn't spoken of very often. For the most part NPCs dedicate "whatever" to "such and such god," and some areas of the map are named for a god, like "Grenth's Footprint."[3]

Legend of Zelda: Ocarina of Time: Some magic items, mention of gods, one character is a fairy. Other characters are shown using magic, plot deals with an item considered holy. . . . Sadly, this game is pretty murky in terms of spirituality. The plot of this game first involves hunting for a familiar item to Zelda fans: the Triforce. In the plot, this item was created by the gods of Hyrule and can grant the wishes of whoever owns it. On the subject of gods, this game features three goddesses who are credited with the creation of Hyrule. These three are later shown being prayed to at the end of the game.[4]

Sims Medieval: Hero class Wizard casts spells, looks into crystal ball, Hero class Priest(s) can pray, player is understood as deity, Grim Reaper appears.[5]

World of Warcraft: Lots of magic in this game: from auras to ranged damaging ice novas, resurrection spells, etc. In addition, you see many characters and NPCs (Non-player characters) which seem to have evolved half way between two species. There are also ghosts that linger in some quests, and when you die, you become a ghost and your object is to run back to your body to be revived.[6]

In terms of standard conceptualizations in the social science of religion, the problems boil down to two issues: (1) promotion of non-Christian religions, and (2) favorable depiction of magic. These two problems may not cause much worry

for members of liberal Christian denominations, nor for believers who make a strict distinction between their faith, which is real, and fiction, which is not to be taken seriously. But a considerable body of social-scientific research indicates that these people are not the ones who sustain the religious world. Rather, religion gains its strength from the strongest believers: sects, clerical orders, fundamentalists and evangelicals. Their faith operates in significant *sectarian tension* with the secular world, and they draw their neighbors and family members away from secularism through their social bonds and by saturating the wider culture with their ideas.[7] Today, however, modern technologies have become not only the medium for global communication but a force pulling in the opposite direction, away from ancient religions.

Over the past twenty years, a vast social science literature has used questionnaires to study people's use of the new information and communication technologies, although many important questions have still only been touched upon rather than studied deeply. During the period 2000–2004, the General Social Survey administered a battery of questions about website use to a reasonably representative sample of the American public. Table 2.1 reports some results of tabulating a few of them against the standard GSS question "How often do you attend religious services?" At least 2,300 respondents answered this question plus each questionnaire item about use of the web. Anyone who wants to explore these issues more deeply, perhaps through more elaborate statistical methods, can access the data online.[8]

For our purposes, the most interesting one of the website usage items concerns "games you can play on your computer." Table 2.1 reveals that 41.0 percent of respondents who never attend religious services have consulted a game-related website in the past month, compared with only 32.1 percent of those who attend services at least once a week. The people who never attend church are a variegated collection, including not only strict Atheists but also elderly people or others with mobility problems, and people who lack friends or family who might draw them into church. The better comparison group of nonreligious people consists of those who attend once a year or less often, as their rate of attendance could be explained simply by an occasional wedding or funeral in church. Fully 44.4 percent of them visited a game-related website at least once in the past month, 12.3 percentage points higher than those who attend religious services most frequently.

The question about games does not specify what kind, and the popular games at the time included very abstract games like Tetris, sports games, and many varieties other than the narrative games that feature in this book. Thus we would not necessarily expect to see a very strong negative correlation between church attendance and visiting game sites, but the pattern we do see is substantial. The positive correlation between church attendance and visiting religion-related websites is indeed much stronger.

Table 2.1 Frequency of Religious Attendance and Visiting Websites

	Never	Once a Year or Less	More than Once a Year to Monthly	More than Monthly but Not Weekly	Weekly or More Often
In the Past 30 Days, Visited a Website about (2000–2004 GSS):					
Games you can play on your computer	41.0%	44.4%	43.4%	40.3%	32.1%
Religion/church related	6.5%	9.5%	14.0%	28.5%	42.2%
Sexually explicit material	19.3%	16.4%	13.5%	6.1%	4.4%
Science	43.5%	41.0%	35.9%	37.5%	32.2%
Music/concerts	48.4%	49.5%	48.4%	46.2%	36.4%
Visual art/art museums	21.7%	25.6%	24.9%	24.1%	19.7%
Health and fitness	47.0%	52.0%	53.2%	54.8%	51.4%
Personal home pages	29.3%	24.9%	28.6%	24.3%	22.4%
Sites related to your work	51.0%	55.8%	57.1%	58.4%	56.4%
Played Online (2000–2002 GSS):					
Play a game with someone on another computer?	24.1%	25.1%	18.9%	20.8%	14.1%

The seven other topics do not exhaust the full list, but were selected because they help us understand the meaning of the negative correlation between game sites and religion sites. Church attendance appears to discourage visiting sexually explicit sites more strongly than it does game sites, but again on the basis of the GSS data we cannot say exactly how strong the religious hostility specifically to fantasy games might be. Interestingly, church attendance is also negatively correlated with visiting science, music, and art websites. However, we do not see much evidence of this negative religious pressure on websites about health or work, or personal websites. Had the pattern been identical for all seven other topics, we might have concluded that religious people make much less use of the web, and this could possibly have reflected social class differences rather than cultural differences. But that is not what we see, and the data are consistent with the theory that highly religious people have a tendency to reject secular culture in general, including that most recent addition to American culture, computer games.

The bottom row of table 2.1 shows an item from a different battery, which was included in just the 2000 and 2002 GSS surveys and reflects data from 1,637 respondents. Among people who seldom attended church, 25.1 percent had played a game with a person on another computer, compared with only 14.1 percent of respondents who attended church at least weekly. The most recent data reflected in table 2.1 date from a few months before *World of Warcraft* launched in late 2004, and online gaming has evolved greatly since then. Thus, we will need new studies, incorporating batteries of more sophisticated questions, to chart the current and future tension between religion and computer games, let alone to explain it.

One useful questionnaire dataset actually dates from a year earlier than the earliest GSS data reported in table 2.1, and thus fully a dozen years before I completed writing this book. With support from the National Geographic Society, a team headed by James Witte and including me carried out a huge online questionnaire study in 1999, called Survey2000.[9] Large numbers of respondents were recruited through National Geographic's worldwide readership and through educational institutions. The system for administering the batteries of items was very sophisticated, selecting subsets of respondents at random to get one of a number of topical modules, so the dataset is huge in terms of numbers of questions as well as numbers of answers. Survey2000 contained a series of questions about leisure activities, one of which was "playing video games." Table 2.2 shows that adult videogame players were slightly less likely to participate in religious groups and to like hymns and gospel music. The large number of respondents makes it possible to control for other variables. For example, the results are very much the same if one samples only people age 18–29 and separates the males from the females.

Since I managed federal funding for the General Social Survey for the better part of a decade and was part of the Survey2000 team, I am in a good position to

Table 2.2 Videogames and Religion Variables in Survey2000

	Playing video games?		
	Never	Sometimes	Often
Participate in religious groups?			
Not at all.	64.0%	65.6%	71.2%
Am a member.	17.3%	18.4%	15.8%
Am an active member.	18.7%	16.0%	12.9%
Total	100.0%	100.0%	100.0%
Respondents:	21,382	19,132	6,575
Hymns and gospel music?			
Like it very much.	9.2%	7.9%	7.1%
Like it.	27.8%	24.8%	20.1%
Have mixed feelings.	34.5%	35.1%	33.1%
Dislike it.	15.5%	17.4%	19.3%
Dislike it very much.	8.3%	9.9%	14.8%
Total	100.0%	100.0%	100.0%
Respondents:	16,863	14,989	5,205

compare their samples of respondents. The General Social Survey administers the questions through an at-home interview and recruits respondents to match the general noninstitutionalized population as closely as is practical. Survey2000 was able to reach a much larger sample of respondents, but one that was less representative of the general population. However, the most obvious bias of Survey2000 is that all of its respondents were computer users who already by 1999 were comfortable responding to an online questionnaire. This means that any religious-secular differences would not be merely the result of later adoption of Internet by religious people, and thus for once a sampling bias works in favor of good social science, rather than against it. While lacking a perfect comparison with the general population, I am struck by how many of the Survey2000 respondents report no involvement with religious groups.

Clearly, great opportunities exist today for online surveys specifically designed to assess the differing orientations toward fantasy games of people having different religious views, and even to explore over time how participation in fantasy gameworlds might change an individual's religiosity. For example, a questionnaire including a battery of items measuring conventional religiosity could also list twenty online activities, including "play *World of Warcraft* or a similar online fantasy game." However, since the topic of this chapter is culture, it is worth

noting that questionnaires are a favorite tool of sociologists, but research on culture is more central to anthropology which makes much less use of sample survey methodologies. Indeed, the method used most intensively in this book is precisely ethnography—not merely doing the sociological method of participant observation by actually playing the game, but focusing on the culture of the games while playing them, which is more properly called *ethnography*.

Cultural anthropologists do not merely observe "the natives" performing rituals, while doing scientific ethnography. They also rely upon *native informants*, members of the culture who are willing and able to communicate the custom of their tribe to the anthropologist. A particularly apt example was E. E. Evans-Pritchard, who enlisted natives as research assistants—almost as spies—to obtain secrets he could not have obtained himself.[10] Particularly in my earlier research on *World of Warcraft*, I often benefitted from insights offered by other players, and for this book I read extensively in forums, wikis, and blogs where thousands of players report their thoughts and experiences. Thus, I benefited from many native informants who belonged to the Gamer tribe. What about the rival tribe of Antigamers? We can thank Senator Tom Coburn and some of his Republican colleagues for having served as the functional equivalent of native informants, by at least beginning to articulate their opposition to the emerging secular gaming culture.

The Political Arena

In MMOs, battlegrounds designed for player-versus-player combat are often called *arenas*, and Washington, DC, is in many ways indistinguishable from one of these contest instances. Neither in political Washington nor in *World of Warcraft* does one see real blood spilled, and there are qualities of culturally defined game to both. In December 2010, Republican senator Tom Coburn of Oklahoma issued a report, *Wastebook: A Guide to Some of the Most Wasteful Government Spending of 2010*.[11] It lists one hundred wasteful expenditures of the US federal government, highlighting the ten he and his staff consider the most egregious. Number 6 is "Studying World of Warcraft and Other Virtual Games—(Irvine, CA) $2.9 Million." On January 1, 2011, the Fox News cable channel, in its morning roundup program *Fox and Friends Sunday*, publicized this antigame claim, saying "three million dollars" were wasted studying *World of Warcraft*.

Coburn's one-page condemnation begins, "Most people have to work for a living; others get to play video games." There is an accompanying illustration that is the cover of Bonnie Nardi's book *My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft*.[12] Footnotes link to the website of the National Science Foundation, specifically to abstracts of two grants, one for $100,007 to Professor Nardi, and one for $2,997,936 to Walt Scacchi, a colleague of Nardi at

the University of California, Irvine. The abstract for Nardi's grant, which is in the public domain, explains that the grant was exploratory in nature, and states its scientific motivation clearly:

> This exploratory study will analyze and understand the ways in which players of World of Warcraft, a popular multiplayer game, engage in creative collaboration. World of Warcraft is a massively multiplayer online role playing game with ten million players worldwide. The proposed research is novel in locating creativity in the context of collaboration in a distributed online space. Most creativity research is laboratory based. It takes the individual as the unit of analysis. This research will examine creativity as a collaborative act, and will investigate creativity in a distributed online context.
>
> The research will focus on modding—the creation and distribution of player-created software modifications that extend the game—as an act of creative collaboration. What is the effect of collaboration on creativity? What motivates players to maintain engagement? How does the game software itself support or hinder collaboration? What interaction tools do players use to undertake creative collaboration? What can be learned from creative collaboration in games about mediated collaboration in general? Can these principles be translated to other environments such as work, or does the very context of "play" have inherent qualities that cannot be easily translated?
>
> The increasing confluence of work and play in games and virtual worlds is a topic of growing interest in industry and the military. The practices of millions of young people are being shaped by participation in multiplayer games. Players will take these practices into the workplace and military service. Investigating how creativity is enabled by collaborative online practices is vital to our understanding of how work and military service can be reshaped to encourage and sustain creative activity in these arenas.[13]

Scacchi's grant was not a study of *World of Warcraft*, nor indeed of any other game, but a large research project on "decentralized virtual activity systems."[14] Nardi is a co-principal investigator on it, and indeed UC Irvine is a center of research on virtual environments, where faculty members often collaborate on a variety of projects. By December 2010, the grant's abstract had been augmented with fifteen literature citations, including essays about games both Nardi and Scacchi had contributed to the peer-reviewed online journal *First Monday*. Both are extremely active researchers in the broad new research areas of virtual environments, in which games are just a subfield, and both had independently

contributed chapters to the 2010 book I edited on the subject, *Online Worlds*. It is also the case—and public knowledge—that I managed review and funding of these two grants. I should note that under current government rules, editing a book does not give the editor a conflict of interest with the authors, and editing *Online Worlds* was appropriately done outside my government responsibilities and restrictions.

Nardi's chapter, "Culture and Creativity: *World of Warcraft* Modding in China and the US," was written in collaboration with Yong Ming Kow, a graduate student in information and computer sciences who is interested in how modding culture can shape the future of software development more generally.[15] *World of Warcraft* permits users to write mods in the Lua scripting language, with technical restrictions that prevent people from altering the game to their own competitive advantage. In my own research I often used the CensusPlus mod that allowed me to count how many avatars of different kinds were online at any given moment, for example to chart the population changes over a period of weeks when *World of Warcraft* added a new virtual continent.[16] Modding is an example of open source software creation, and a very important topic in computer science. Given the fact that China and the United States are competing currently for economic and technological power, and *World of Warcraft* modding is done in different ways in the two countries, it would seem that $100,007 was a good investment in Nardi's exploratory grant.

Scacchi's chapter, "Game-Based Virtual Worlds as Decentralized Virtual Activity Systems," is an example of the way that innovators have been adapting game technology to "serious" purposes.[17] People who have not extensively experienced the new virtual world technology find it difficult to imagine the implications of this revolutionary technology, and therefore it may seem frivolous to them, or they may even be repelled by it. Cultural conservatives may associate games with gambling, a vice they have good reason to oppose. Indeed, the *Pirates of the Caribbean* MMO, which seems aimed at children, requires the player to win at poker and blackjack at virtual gambling tables. One thesis of this book is that people dedicated to existing cultural traditions probably should oppose virtual world technology and the games within it. But Scacchi's work is a very serious exploration of the positive uses of the technology, and his chapter offers two examples. The first is *DinoQuest Online*, a game-like system for teaching elementary school children and the general public about paleontology and the life sciences. The second example is a mod of an existing game that transformed it into a training tool for workers in high-tech semiconductor factories.

It should not be assumed that Senator Coburn was alone in his antagonism to federal support of game-related research, because three other leading politicians supported his efforts, 2008 Republican presidential nominee Senator John

McCain, House Majority Leader Eric Cantor, and Congressman Darrell Issa. In August 2010, Coburn and McCain had jointly issued *Summertime Blues: 100 Stimulus Projects that Give Taxpayers the Blues*.[18] Number 39 was titled "Research: Marketing Video Games to the Elderly (Raleigh, NC and Atlanta, GA)—$1.2 million." This title was an extreme misrepresentation of the research being criticized, which could hardly have been unintentional given that Coburn and McCain cite a *Time* magazine article that reported more fully on the research, titled "Can Gaming Slow Mental Decline in the Elderly?"[19] This is a very serious research question in cognitive science and mental health, but actually the research project was broader, involving information technology other than games, which the senators' staff must have seen when they read the abstracts on the NSF website. The research was supported by a pair of collaborative NSF grants actually titled "Improving Older Adult Cognition: The Unexamined Role of Games and Social Computing Environments."[20] As in the cases of the Nardi and Scacchi grants, I managed review and funding, in accordance with appropriate NSF peer review procedures. All of the information reported here is in the public record, and I take very seriously my obligation to preserve the confidentiality of NSF review.

The following February, after the Republicans had captured the US House of Representatives, the study was disparaged again in the heated debate over the not yet decided federal budget for the fiscal year that had started the previous October. The new chairman of the House Oversight Committee, Darrell Issa, introduced an amendment to the funding bill, saying, "None of the funds made available by this Act may be used by the National Science Foundation to study whether video games improve mental health for the elderly."[21] Strictly speaking, videogames are electronic games that play through a television set, and games played on computers are not video games, although the studies funded by these grants used a Nintendo Wii for part of the work, which is a videogame system. However, the cognitive dimensions of mental functioning studied do not relate to the strictly psychiatric notion of "mental health" versus illness. In other words, the amendment was incompetent as guidance for science funding, but was raw political rhetoric uttered in the heat of a culture war. Issa's amendment was not adopted, but it was clearly a move in the culture game.

Late in 2010, Representative Eric Cantor launched an online system where citizens could use keywords to search the NSF awards database to identify grants they felt should not have been funded.[22] Cantor suggested trying these keywords: "success, culture, media, games, social norm, lawyers, museum, leisure, stimulus," and offered two examples, both of them game-related: "Recently, however NSF has funded some more questionable projects—$750,000 to develop computer models to analyze the on-field contributions of soccer players and $1.2 million to

model the sound of objects breaking for use by the video game industry." As the public grants database reports, I was not the person who managed review of either of these grants.

Writing in *USA Today*, Dan Vergano offered the facts about Cantor's two examples, under the accusatory title "How Some Politicians Stumble on Science." After checking with NSF, he reports,

> The soccer study turns out to be computer scientists studying how remotely connected teams form to conduct "nanoscience, environmental engineering, earthquake engineering, chemical sciences, media research and tobacco research." And the "breaking things" study turns out to be acoustics experts "pursuing fundamental advances in computational methods while solving several particularly challenging sound rendering problems," so that the U.S. military, among others, can create more realistic combat simulators for troops.[23]

The results of the "breaking things" study, which was actually called "Sound Rendering for Physically Based Simulation," could be applied to games, and also could have many other applications, but the study is fundamental research at the intersection of computer simulation and acoustics, developing methods to synthesize the sounds produced by many kinds of physical events.[24]

Vergano may have been wrong, or at least incomplete, when he implied in his title that incompetence—or political cynicism—was responsible for the public criticism of research studies by politicians. It is possible, although evidence is lacking, that opposition to game research partly reflects the worldly asceticism that Max Weber said marked traditional Protestantism, and the new gaming culture defies many Protestant traditions.[25] The prominence given to Nardi's book in Coburn's December 2010 report—with its cover picture of a Night Elf priest from *World of Warcraft*, hints at an awareness that a culture war is in progress, and a significant fraction of the public is prepared to scorn elves and cultic priestesses in favor of well-established religion.

The publisher had asked me to read Nardi's manuscript and published part of my response on its back cover: "World of Warcraft is the best representative of a significant new technology, art form, and sector of society: the theme-oriented virtual world. Bonnie Nardi's pioneering transnational ethnography explores this game both sensitively and systematically using the methods of cultural anthropology and aesthetics with intensive personal experience as a guild member, media teacher, and magical quest Elf." It is worth noting that she played the game on her own time, as I did for my own book on *World of Warcraft*, and neither of us used tax money to do so. Her government grant was specifically for the part of

her research comparing the use of the new technology in China versus in the United States, a worthy research project whatever side one takes in the American culture war, and it was entirely legitimate for her to recapitulate portions of that research in her book.

The cover of Nardi's book was also featured in a report about alleged waste and abuse, *The National Science Foundation: Under the Microscope*, issued May 26, 2011, by Senator Coburn.[26] The senator is entirely correct that all government agencies must serve taxpayers efficiently, and any waste is to be deplored. However, he advocates terminating funding for the social sciences at NSF and greatly reducing educational efforts, which can be explained as an expression of his position in the culture wars. The social sciences, of necessity, call into question all the standard institutions and doctrines of society, although hopefully without any distorting bias against any of them. All human cultures are problematic, including the new cyberculture to which gameworlds belong. For many years, the evangelical Christian groups that are a big part of Coburn's constituency have warned against the many videogames they consider sacrilegious, and as this book makes clear the fantasy religions in the gameworlds are only very seldom Christian, and very frequently Pagan in nature.[27]

It is revealing that while Coburn's report on NSF especially targets the social sciences, the examples given chiefly concern human-centered computing, online social media, and games. My own position on the cultural battlefield is suggested by the fact that of all program officers managing grants criticized by Senator Coburn, I manage by far the largest number, which anyone can discover by inspecting the online grant abstracts he cites. There is much to praise about efforts to reduce waste in government, and I welcome Senator Coburn and his supporters to read this book. If they wish, they can conceptualize it as a travelogue of an alien nation with which they are currently at war.

The Lay of the Land

Given that computer gameworlds have become a political battleground, it is worth charting this contested territory, from the perspective of the attackers. Shortly before this book went to press, Senator Coburn issued another Wastebook, so this section will use four reports from his office, to catalog all the game-related government investments his staff criticized. While many of the examples were NSF grants, some received funding from other agencies. Not infrequently, the grant itself was not really about games, or only partly about them, but here I will consider all the examples in the four reports that Coburn's staff categorized in terms of computer games. The point is not so much to rebut the criticisms leveled against particular government-funded project as to sketch the wide range of

scientific questions that game research can explore, and to identify many of the ways in which games can be valuable for society. Any particular scientific research project is capable of failing, and transformative research is typically risky. Sufficient information will be provided here so that the reader can check the final results of any of the projects, many of which were very far from conclusion when I wrote these pages.

Coburn's reports may or may not interpret information correctly, but they provide hundreds of references, often in the form of links to websites belonging to the funding agency or to the university or other organization that received the funding, including links to the online abstracts of the NSF grants listed in table 2.3. All NSF grants have unique seven-digit identifier numbers, which are generally given in Coburn's reports, and the online database of all grants allows one to search by this number or by keywords in a description of the grant. Anybody in the world can access this database at http://www.nsf.gov/awardsearch/, and all of the information reported here is in the public record. I have already quoted the abstract of one of Nardi's grants, and every grant has such an abstract. As in the case of her grant, many also list publications related in some way to the grant. Each abstract also gives contact information for the principal investigator. Imagine—and this is certainly a fantasy—that a grant had been given to Robert E. Howard to write his Conan stories, on which the *Age of Conan* MMO was based. His contact information might be given as: Robert E. Howard rehoward@conanuniversity.edu. To find his academic home page, one merely enters into Google: "Robert E. Howard site:conanuniversity.edu." I did this for all the real grants listed here, in order to learn more about the project.

Table 2.3 begins with grants I have already discussed. I should note that the four Coburn reports also list a large number of grants to study online social networking, and looking them up in the online database reveals they tend to be made by the same programs and managed by the same program directors as the game-related research projects. Thus, cultural traditionalists believe that the new forms of online social life that have become so important in postmodern American culture—and so financially significant worldwide—are frivolous or subversive of traditional values. The two collaborative grants about older adult cognition are listed separately, because while they support the same project, they were made to different institutions with two coequal principal investigators, Anne McLaughlin at North Carolina State University and Maribeth Coleman at Georgia Institute of Technology.

Following the McLaughlin and Coleman grants in the table is a very successful project carried out by a remarkably productive team of researchers that studied the social and economic dynamics of the MMO with which I begin the next chapter, *EverQuest II*. Anyone who explores Noshir Contractor's website, or

Table 2.3 Grants Relating to Gameworlds and Avatars in Senator Coburn's Reports

Coburn's Description	Official Title	Grant ID	Investigator	Institution
Studying World of Warcraft and Other Virtual Games	Creative Collaboration in an Online Game	0829952	Bonnie Nardi	University of California, Irvine
Studying World of Warcraft and Other Virtual Games	Decentralized Virtual Activities and Technologies: A Socio-Technical Approach	0808783	Walt Scacchi	University of California, Irvine
Research: Marketing Video Games to the Elderly	Improving Older Adult Cognition: The Unexamined Role of Games and Social Computing Environments	0905127	Anne McLaughlin	North Carolina State University
Research: Marketing Video Games to the Elderly	Improving Older Adult Cognition: The Unexamined Role of Games and Social Computing Environments	0904855	Maribeth Coleman	Georgia Institute of Technology
What are the group dynamics like in the online video game EverQuest 2?	Virtual Worlds: An Exploratorium for Theorizing and Modeling the Dynamics of Group Behavior	0729505, 0841583	Noshir Contractor	University of Illinois at Urbana-Champaign; Northwestern University
What are the group dynamics like in the online video game EverQuest 2?	Virtual Worlds: An Exploratorium for Theorizing and Modeling the Dynamics of Group Behavior	0729421	Jaideep Srivastava	University of Minnesota, Twin Cities
What are the group dynamics like in the online video game EverQuest 2?	Instrumenting Behaviors and Attitudes in Virtual Worlds	0628036	Dmitri Williams	University of Illinois at Urbana-Champaign

What are the group dynamics like in the online video game EverQuest 2?	Instrumenting Behaviors and Attitudes in Virtual Worlds	0628072	Daniel Hunter	University of Pennsylvania
What is the relationship between online virtual world users and their avatar?	The Avatar-Self Relationship: An Exploratory Study of Identity Negotiation in Second Life	0848692	Ulrike Schultze	Southern Methodist University
Where is the line between work and play in online virtual worlds?	Productive Play: The Convergence of Play and Labor in Online Games and Virtual Worlds	0744197	Celia Pearce	Georgia Institute of Technology
How do people interact in digital worlds?	Transformed Social Interaction in Virtual Environments	0527377	Jeremy Bailenson	Stanford University
How do people interact in digital worlds?	Exploring the Behavioral and Facial Similarities of Humans and their Virtual Representations	0741753	Jeremy Bailenson	Stanford University
How do people interact in digital worlds?	Virtual Worlds: Scalability and Content Creation	0835601	Vladlen Koltun	Stanford University
Can you trust other people in virtual worlds?	Virtual Civility, Trust, and Avatars: Ethnology in Second Life	0942997	Eiko Ikegami	New School
Can avatars in online virtual worlds become more social engaging?	Virtual Environments and Behavior	9873432	Jack Loomis	University of California, Santa Barbara

(*continued*)

Table 2.3 (*continued*)

Coburn's Description	Official Title	Grant ID	Investigator	Institution
Can avatars in online virtual worlds become more social engaging?	Explorations of Virtual Environments as a Methodological Tool in Social Psychology	9872084	James Blascovich	University of California, Santa Barbara
Can avatars in online virtual worlds become more social engaging?	Advanced Training Institute in Social Psychology: Immersive Virtual Environment Technology	0129717	James Blascovich	University of California, Santa Barbara
Can avatars in online virtual worlds become more social engaging?	Virtual Environment Technology and Eyewitness Identification	0219399	James Blascovich	University of California, Santa Barbara
Can avatars in online virtual worlds become more social engaging?	Using Virtual Environment Technology to Understand and Augment Social Interaction	0205740	James Blascovich	University of California, Santa Barbara
Can avatars in online virtual worlds become more social engaging?	Design and Evaluation of Socially Engaging Avatars	0915472	James Blascovich	University of California, Santa Barbara

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